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Send Samples Here.

SEP 2 8 31 1983

DEPARTMENT OF
COMPLETE MINERAL ANALYSIS

GENERAL INFORMATION		WELL DATA
TOWN <u>Washington</u> (?) <u>UMTHRUN</u>	COUNTY <u>THURGOOD</u>	Well Number _____
REPORT TO: <u>M.W. VanLier</u>	DATE <u>8/12/83</u>	Date of Construction _____
<u>WAWM, Region 6</u>	RECEIVED: <u>8/12/83</u>	Depth _____ ft.
<u>Washington</u> , IA <u>52353</u>	(Zip)	Hours Pumped _____
Laboratory Number <u>3-15812</u>	Mineral Number _____	Rate Pumped _____ gpm.

FIELD DATA	
Collector's Name _____	Date of Collection _____
Source of Sample <u>Umthrun Trucking</u>	Sampling Point: <u>Sample tap</u>
Was sample free of Turbidity when collected? <input type="checkbox"/> Yes <input type="checkbox"/> No	Temperature _____ °C
Was Polyphosphate used? <input type="checkbox"/> Yes <input type="checkbox"/> No	Alkalinity mg/liter as CaCO ₃ P _____ T _____
pH _____	Specific Conductance @ 25°C (77° F) _____ micromhos.

LABORATORY ANALYSIS	
Specific Conductance @ 25°C (77°F) <u>11,000</u> micromhos.	pH(s) <u>8.5</u>
Soluble Iron <u>72</u> mg/L	Total Iron <u>67</u> mg/L
Filterable Residue <u>8930</u> mg/L @103°C.	Total Residue <u>9080</u> mg/L @103°C.
Alkalinity as CaCO ₃ P <u>none</u> mg/L	T <u>none</u> mg/L
	Hardness as CaCO ₃ <u>3480</u> mg/L
	Hardness as CaCO ₃ <u>204</u> gpg
	Langelier Index <u>-5.7</u>
	Stability Index <u>14.2</u>
	Silica (SiO ₂) <u>240</u> mg/L
	pH <u>2.8</u>

CATIONS: (mg/liter)	TRACE METALS: (mg/liter)
Potassium <u>170</u>	Arsenic <u><0.01</u>
Sodium <u>650</u>	Barium <u>0.1</u>
Calcium <u>820</u>	Cadmium <u>0.05</u>
Magnesium <u>19</u>	Chromium <u>0.42</u>
Manganese <u>20</u>	Copper <u>7.2</u>
	Lead <u>0.32</u>
	Mercury <u><0.001</u>
	Selenium <u><0.01</u>
	Silver <u><0.01</u>
	Zinc <u>5.8</u>
	Nickel _____
	Strontium _____
	Aluminum _____
	Vanadium <u>0.84</u>

PESTICIDES: (mg/liter)
Chlorinated Hydrocarbons:

Organophosphates and Carbamates:

HERBICIDES:

ORGANICS:

ANIONS: (mg/liter)
Nitrate <u>1900</u>
Fluoride <u><0.1</u>
Chloride <u>1300</u>
Sulfate <u>3600</u>
Bicarbonate <u>0</u>
Carbonate <u>0</u>

RADIOACTIVITY: (picocuries/liter)
Gross Alpha _____
²²⁶ Radium _____
²²⁸ Radium _____
Gross Beta _____
⁹⁰ Strontium _____

COMMENTS: Sample was fairly turbid & had some soil on the bottom. Sample had unidentifiable odor.

Date of Preliminary Report _____



Date of Final Report AUG 30 1983

W. J. Haessler Jr. Ph.D.